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Abstract: Indian and Chinese enterprises have emerged as important outward investors in recent times with their involvement in a number of prominent Greenfield investments and acquisitions. The theory of international business posits that the ownership of some unique advantages having a revenue generating potential abroad combined with the presence of internalization and locational advantages leads to outward FDI. Conventional MNEs based in the industrialized countries have grown on the strength of ownership advantages derived from innovatory activity that is largely concentrated in these countries. It examines the case of steel industry that has become an important sector of overseas activity for Chinese and Indian companies with a string of major acquisitions of foreign MNEs for acquiring footprints and natural resources in order to identify the sources of ownership advantages and strategies of outward investments from emerging countries.

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1. Introduction

An important trend of the past decade is the emergence of significant outflows of foreign direct investments originating in developing countries. In particular, outward foreign direct investments (OFDI) from emerging countries such as China and India besides Brazil and South Africa have grown in salience over the past few years and represent evolution of a new set of corporate players on the global stage based in these countries. These new players, or emerging multinational corporations (E-MNEs) are undertaking OFDI for acquiring global footprints, securing raw materials supplies, and access to technology and brands, among other strategic assets. It is of interest to examine the emerging trends, motivations, entry modes, and sources of strength or ownership advantages of the E-MNEs, in terms of the theory of internationalization of firms. For such an analysis, steel industry represents an important industry for a study for two reasons. Firstly, the epicenter of the steel industry has shifted to Asia led by fast growing production and consumption in China, India and other Asian countries. Secondly, steel industry has attracted some of the prominent acquisitions in recent times involving E-MNEs, for instance, acquisition of Corus and NatSteel by Tata Steel, among others. Furthermore, it will be interesting to compare the performance of Indian enterprises in a Chinese comparative perspective, as Chinese steel industry has grown rapidly to assume a dominating position in the world with a number of enterprises undertaking OFDI.

2. Government Policy towards Outward FDI in India and China

Evolution of Indian Government Policy

The early policy of the Indian government towards outward FDI in force during the 1970s permitted only minority participation by Indian companies by way of export of capital goods rather than cash outflows in view of domestic capital and foreign exchange scarcity. In April 1978, an Inter-Ministerial Committee in the Ministry of Commerce was set up to clear proposals for Overseas Investments. As a part of economic reforms since 1991, policy governing outward investments was also liberalized in 1992 when an automatic approval system for overseas investments was introduced, and cash remittances were allowed for the first time. The total value of investment was restricted to $2 million with a cash component not exceeding $0.5 million in a block of 3 years. In 1995 a single window was created in the Reserve Bank of India (RBI), a fast track route was introduced and investment limit was raised from $ 2 million to $ 4 million. Beyond USD 4 million, approvals were considered under Normal Route at the Special Committee level. Investment proposals in excess of US $ 15.00 million were considered by MoF with the recommendations of the Special Committee and generally approved if the required resources were raised through the GDR route. With the introduction of Foreign Exchange Management Act in 2000, the policy with respect to outward investment was overhauled and the limit for investment was raised to US$ 50 million. Companies were allowed to invest 100 per cent of the proceeds of their ADR/GDR issues for acquisitions of foreign companies and outward direct investments. The limit was raised in March 2002 to US$ 100 million for automatic route. In a significant liberalization of policy governing outward investments in March 2003, government allowed Indian companies to invest under automatic route upto 100 per cent of their net worth. This limit was raised further to 200 per cent of net worth in 2005, to 300 per cent of net worth in 2007, and finally to 400 per cent of net worth in 2008 to facilitate large acquisitions as the foreign exchange reserves of India built up.[i] The government policy, therefore seems to have been guided by the relative foreign exchange scarcity in the country besides the recognition of the importance of outward investments for the overall competitiveness of Indian industry. It has three distinct phases of evolution, viz. restrictive policy during 1978-92, permissive policy during 1992-2003, and liberal policy, since 2003 (Nayyar 2007).

Recognition of the outward investments for competitiveness of enterprises has also resulted in creation of financing facility for outward investments by Indian companies through the Export-Import Bank of India (Exim Bank). Exim Bank has extended term loans to Indian companies for funding their investments in overseas affiliates ever since its inception in the early 1980s. Currently the Bank's Overseas Investment Finance (OIF) program provides financing for both equity as well as loans of Indian companies in their affiliates abroad. Since April 2003, Indian commercial banks have also been permitted to extend credit to Indian companies for outward investments. In November 2006, the prudential limit on the bank financing was raised from 10 per cent to 20 per cent of overseas investment. From 2005, Indian firms were allowed to float special purpose vehicles in international capital markets to finance acquisitions abroad facilitating the use of leveraged buy-outs in international financial markets. Therefore, they were provided access to the expanding international capital market. India has also concluded bilateral investment promotion agreements with 63 countries and double taxation avoidance agreements with a similar number of countries. While the enabling policy and access to international markets facilitated outward investments by Indian enterprises, these cannot be adequate by themselves. As per the theory of international operations of firm, a firm needs ownership of certain unique assets to be successful abroad.

Chinese Government's Policy towards Outward FDI

The development of China's outward FDI is a reflection of the country's changing ideology and policies toward MNEs and internationalization. The eighties saw a strong opposition and debates regarding overseas investment and its incompatibility with socialism. It was in 1985 that the first concrete step was taken for promoting overseas investments by the Ministry of Foreign Economic Relations and Trade (MOFERT) when the government released the regulations regarding FDI outflows in its *Provisions Governing Control and Approval Procedures for Opening Non-Trade Enterprises Overseas*. It clearly stipulated that all economic entities and not just trading companies would be eligible for overseas ventures. Internationalization of Chinese large state-owned enterprises was also promoted in China's coastal regions so as to take advantage of international resources and international division of labor. China's coastal-oriented export-led development strategy opened up 14 coastal cities in 1988 and 4 special economic zones. Chinese large state-owned enterprises were for the first time authorized to invest overseas and this was linked with the government's political and economic agenda of expanding China's trade. However, the Asian financial crisis of 1997 led to stricter requirements for approval of overseas investments, which resulted in a slowdown of FDI outflows in the late nineties.

The turnaround came with China's accession to the WTO in 2001 when Premier Zhu Rongji announced the "going abroad" strategy in the 10th five-year plan (2001-2005) and increasing outward FDI became the declared policy of China in order to utilize the growing trade surplus and reduce pressure on the domestic economy. The government now actively promotes outward FDI as an integral part of China's economic development strategy and as a response to competition and globalization. In fact, approval for outward investment clearly requires that the FDI outflow should be technology-acquiring, resource-seeking, market-seeking and foreign exchange-generating (Cheng and Stough, 2007).

China's Export-Import Bank has also done its bit to boost FDI outflows by providing loans to firms for outward investments for resource development and infrastructure. Moreover, in case the investment is undertaken in a low-income country, then Chinese firms qualify for

preferential loans. Fiscal incentives are also provided to firms that use Chinese machinery, plant, and equipment in their overseas ventures. China has also signed bilateral investment treaties with 103 countries and double taxation treaties with 68 countries to support the international expansion of Chinese enterprises.

To sum up, the government policy of the two countries has evolved from a restrictive attitude to more liberal and even promotional policy towards OFDI based on recognition of their role in the country's external competitiveness and with accumulation of foreign exchange reserves. It is only in this decade that the Indian and Chinese companies could undertake large acquisitions and Greenfield investments abroad.

3. Outward FDI from India in a Chinese Comparative Perspective

Growing Significance of Emerging Countries

Table 1 shows that outward investments from developing countries have over time gained in salience accounting for 14 per cent of global outflows in 2006 compared to just 8 per cent in 2003. The importance of key emerging economies namely Brazil, China, South Africa and India as sources of outward FDI among developing countries has increased over the past few years, as highlighted in the literature (Wells 1983, Lall 1983, Kumar 1998, Aykut and Ratha 2004, UNCTAD 2005, 2006; Goldstein 2007; among others). Their importance as sources of FDI has gone up in recent years with their combined share going up from 12 per cent in 2003 to 16 per cent in the next two years to a staggering 35 per cent in 2006. It would appear that 2006 has seen sharp rise in outward investments not only from India but also from Brazil, South Africa and China as well. It remains to be seen whether the increased was resulting due to some large acquisitions or whether it is the new scale of activity that will be sustained in the coming years. Some of outward investments are reported as emerging from tax havens such as British Virgin Islands and Cayman Islands and could be attributed to round tripping.

In terms of absolute magnitudes, share of outward FDI from India in outflows from developing countries at 6 per cent compared to 9 per cent for China is impressive considering the fact that Chinese economy is nearly 2.5 times that of India. Another comparison across countries is in terms of outward FDI as a percentage of gross fixed capital formation (GFCF) in the source economy also reported in Table 1. It suggests that the share of O-FDI in GFCF was higher for India than China in 2003-2004, roughly comparable in 2005 and again in 2006.

Table 1: FDI Outflows from Emerging Countries

(million US$)

	2003	2004	2005	2006
World	560087	877301	837194	1215789
Developed economies	503966	745970	706713	1022711
Developing economies	45372	117336	115860	174389
% share in total	(8)	(13)	(14)	(14)
China	2855	5498	12261	16130
% share in developing countries	(6)	(5)	(11)	(9)
India	1879	2179	2495	9676
% share in developing countries	(4)	(2)	(2)	(6)
Total share of 4 emerging countries (viz. Brazil, India, China and South Africa)	(12)	(16)	(16)	(35)
FDI Outflows as a percentage of Gross Fixed Capital Formation				
World	8.4	10.1	9.2	11.8
Developed Countries	10.3	11.8	11.1	14.1
Developing Countries	2.1	5.5	4.7	6.4
China	0.4	0.7	1.5	1.9
India	0.8	1.2	1.4	5

Source: Compiled from on-line UNCTAD's FDI database and UNCTAD *World Investment Reports*, 2004 and 2007.

What Can be learnt from Sectoral Distribution of OFDI?

Table 2 summarizes the sectoral distribution of OFDI stocks of the two countries to get an idea of their focus. The sectoral breakup for Indian OFDI stocks is available for 2004 only which suggests that manufacturing accounted for nearly half of total OFDI stock of India. Services also had a substantial (40 per cent) share of OFDI stock with information and communication (ICT) services sector being the most important. The extractive sector was virtually non-existent upto 2000. However, by 2004 its share had gone up to 11.4 per cent. In China's case, services comprising largely trading and business services besides finance accounted for 71 per cent share in 2006. Extractive sector also had a considerable proportion with a 21 per cent share. Manufacturing had a rather small share of 8.31 per cent in 2006. While the importance of services and manufacturing was declining, that of extractive sector was rising. It would appear from a comparison of sectoral composition of OFDI in the two countries that Indian enterprises were undertaking OFDI in manufacturing and services to pursue a strategy of horizontal expansion or internationalization of operations seeking global footprints, locating manufacturing bases across the borders. The OFDI of Chinese enterprises on the other hand seem to be motivated by vertical integration seeking access to natural resources and raw materials and trading of finished goods produced in China. The proportion of horizontal manufacturing bases is rather small.

Table 2: Sectoral Distribution of OFDI Stocks of India and China

(million US$)

	India			China		
	2000	2004	2006	2000	2004	2006
Extractive	65.18	1044.60	n.a.	n.a.	6785.60	18718.32
% share in total	1.47	11.44			15.15	20.65
Manufacturing	1776.38	4423.98	n.a.	n.a.	4538.07	7529.62
% share in total	40.04	48.44			10.13	8.31
Services	2595.37	3663.61	n.a.	n.a.	33453.59	64382.97
% share in total	58.49	40.12			74.71	71.04
Total	4437.00	9132.00	12964.00	27768.00	44777.26	90630.91

Source: Authors based on data collected from Indian and Chinese Government sources and UNCTAD.

What can be learnt from comparisons of Indian and Chinese Enterprises?

The above comparisons do not reflect on the profile of international enterprises originating in India and other emerging countries. A recent study by the Boston Consulting Group (BCG, 2008) has identified 100 companies (Global Challengers) from rapidly developing economies (RDEs) that are globalizing and are likely to emerge as global players. This list covers Indian companies along with those from 13 other emerging countries and hence could also be useful in putting the globalization of Indian enterprises in a comparative global perspective. The BCG list is dominated by two Asian countries namely China and India with 41 and 20 companies in global 100 respectively. The next country in the list viz. Brazil has only 13 companies. According to the key characteristics of Chinese and Indian companies summarized in Table 3, on average Indian companies are much smaller in scale compared to their Chinese counterparts but have much higher proportion of international sales at 47 per cent compared to just 17 per cent in case of Chinese companies. A striking difference is the fact that all the 20 Indian companies are publicly traded companies and none of them is state owned while 29 of 41 Chinese companies are state owned. A greater proportion of acquisitions (78%) by Indian companies was in developed countries compared to those by Chinese companies (68%). Therefore, profile of an Indian company emerges to be one of a fast growing and rapidly internationalizing company that is publicly traded and privately managed compared to larger state owned enterprises of China.

Table 3: Key Characteristics of Indian and Chinese Globalizing Companies

	India	China
No. of companies in BCG 100	20	41
Average size, US$ billion	3.9	14.5
CAGR, %	31	26
Share of international sales, %	47	17
Operating profit margin, %	16	14
CAGR of total share holders return, %	38.2	27.7
Public traded (quoted)	20 out of 20	34 out of 41
State owned	*None*	*29 out of 41*
M&A deals by sample companies	26	17
Proportion of matured markets in M&A deals	68	78

Source: Compiled from BCG (2008).

Another study suggests that the bulk of the Chinese outward FDI is concentrated in Hong Kong (64 per cent), Cayman Islands (15.6 per cent) and Virgin Islands (3.5 per cent) which may be driven by the round tripping considerations to take advantage of tax preferences for foreign investors prevailing in China. In terms of motivations, Chinese outward investments are dominated by outward investments made by three state owned oil companies viz. CNPC, CNOOC and SINOPEC which are driven by natural resource seeking motive, although some manufacturing companies such as Lenovo, TCL, Nanjing Auto are beginning to make acquisitions for technology and brands (Hagiwara 2006). The natural resource seeking investments are outward investments but not internationalization of operations. In India's case, most of the outward investments are undertaken generally by private enterprises seeking to internationalize their operations through horizontal acquisitions and Greenfield investments.

4. Explaining FDI Flows from Developing Countries: What can be learnt from theory

The theory of international operation of the firm – which has evolved over the years with the contributions from Hymer (1976), Caves (1971) and Dunning (1979) among many others – posits that the ownership of some unique advantages having a revenue generating potential abroad combined with the presence of internalization and locational advantages leads to OFDI. Enterprises based in the industrialized countries have emerged as MNEs on the strength of ownership advantages derived from innovatory activity that is largely concentrated in these countries. Very little is known about the sources of the strength of enterprises based in developing countries, such as India, that enables overseas investment.

Kumar (2007, 2008) has argued that the main source of the advantage enjoyed by Indian enterprises was their ability to develop cost effective processes and products. This frugal engineering capability has resulted from Indian enterprises' evolution in a low country setting and hence dealing with highly price conscious and demanding customers. As the volumes in India lay at the bottom of the pyramid, the companies focused on innovations for developing affordable yet functionally efficient products. Indian pharmaceutical and chemical enterprises developed cost-effective processes of known chemical entities and have emerged as the most competitive suppliers of generic medicines globally. Similarly, Indian automobile producers, in order to cater to some of the most demanding customers in the world at their home base has given to Indian companies a unique ability to deliver value for money epitomized in the development of world's cheapest car Nano, besides other innovations. Another source of their ownership advantage lay in their accumulated learning, organizational and managerial know how that enables them to manage operations across different cultural environments. Long production experience in India gives to Indian companies not only skills and organizational capability to manage large operations but also experience of managing in multicultural settings, given the cultural diversity of the country. This managerial capability also gives them the confidence of managing the acquired facilities besides Greenfield projects. Therefore, managerial capability has emerged as an important ownership advantage for Indian companies. Finally, their ability to raise finance especially for funding large acquisitions had also some thing to do with their evolution in India. Having operated under a system of prudential financial regulations and corporate governance, Indian companies generally enjoy healthy balance sheets and robust credit ratings. Most of them have been listed at Indian stock exchanges for decades and are actively quoted. A number of them have also listed themselves at the NYSE and have followed GAAP systems of accounting and corporate governance. Their healthy balance sheets and their proven organizational skills

have enabled them to attract attention of international banks and financial institutions for funding their leveraged buyout programmes.

It has been argued that OFDI from India has evolved with three distinct phases (Kumar 2008). In the first phase until 1990, largely Indian companies operated small operations as joint ventures in poorer countries in Asia and Africa seeking markets based on adapted and scaled down technologies in relatively low technology sectors. The entry mode was Greenfield. With the onset of reforms with greater freedom to invest abroad, Indian companies made outward investments in other countries to support their exports with local presence. Hence, they began to be concentrated in developed and developing countries where the markets for Indian products and services existed. These investments were concentrated in select industries such as pharmaceuticals and IT software in which Indian companies developed some cost effective processes. The entry mode was largely Greenfield. This comprised the Second Phase in the evolution of Indian enterprises. The third phase in the evolution of Indian enterprises is driven by the motivation of Indian companies to acquire scale and global footprints. Hence it is largely directed at acquiring strategic assets such as brand names (as in the case of Tata-Tetley or White & Mackay), established marketing networks (as in pharmaceutical industry), or access to customers (as in the case of Novelis or Corus in the western world), or access to clients (in IT industry), or technology (as in the case of wind turbines and gearbox technology by Suzlon, or for heavy range of trucks as in Tata-Daewoo), etc. The scales and magnitudes involved are large and the entry mode is often acquisition. These acquisitions are producing new set of global leaders e.g. Tata Steel becoming the fifth largest steel producer in the world after acquiring Millenium Steel, NatSteel and Corus.

The ownership advantages required for different motivations of OFDI will be different. For instance, a horizontal FDI establishing manufacturing base would require ownership assets in the form access to technology, capital, managerial know how and organizational capacity. For natural resource seeking investment will require skills and expertise in mining and exploration and capital. In the case of Chinese enterprises, their large scales of operation and accumulated expertise is a source of ownership advantage. Their government ownership gives them access to capital and other resources. The locational advantages will determine where the investment will be made. In the case of strategic assets seeking investments or market seeking investments, the bulk of the investments may be made in developed countries having firms with strategic assets and markets. The natural resource seeking investments will be made in natural resource rich countries such as Australia, Canada, African countries among others.

5. Indian and Chinese Outward Investments in the Steel Industry

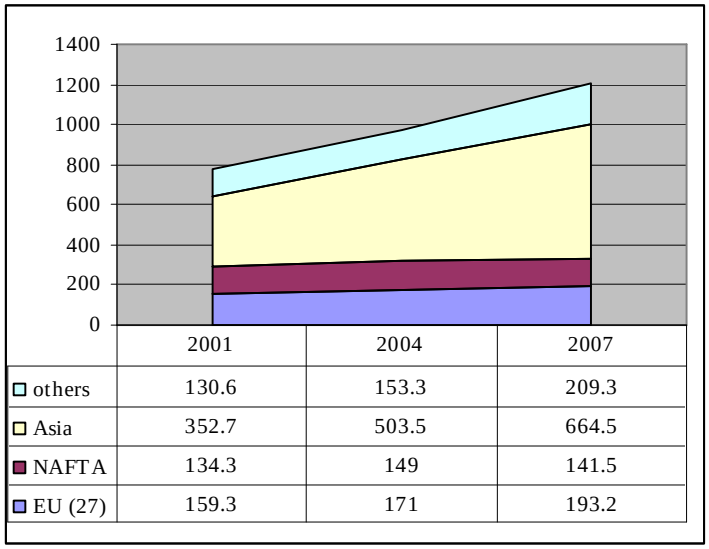
Emerging Patterns in Global Steel Industry

Traditionally, iron and steel have been considered as the commanding heights of the economy since their consumption is an important indicator of the stage of development of an economy. The development experience of countries regarding the relationship between GDP and steel consumption shows an inverted U-shape. The steel intensity of GDP increases with per capita income in the initial phases of development owing to the building of infrastructure like railways, roads and bridges, water and gas works, electricity generation and distribution, plant and machinery and ports and buildings. As the country advances economically, the industrial product mix changes and there is an added demand for steel due to the consumption of automobiles and other consumer durable goods. However, beyond a certain threshold level of income, further increases in GDP do not translate into higher demand for steel due to

saturation of infrastructure and a greater weight of the services sector in the economy. In view of this the epicenter of the steel industry has been gradually shifting away from the EU and North America towards Asia led by strong demand and production in China and India (as shown in Figure 1).

Figure 1: Global Production of Finished Steel

(million metric tones)



	2001	2004	2007
others	130.6	153.3	209.3
Asia	352.7	503.5	664.5
NAFTA	134.3	149	141.5
EU (27)	159.3	171	193.2

Source: based on International Iron & Steel Institute (2008), *World Steel in figures 2008,* Brussels

Steel production is based on process know how and requires relatively large investments. Although the basic technology of steel making is matured and may be available on-the-shelf, some application technologies such as for special steels and alloys for special applications are more closely held. The other characteristic of the steel industry is its scale intensity. The third characteristic is its highly raw material dependent nature. Steel production requires abundant access to iron ore, coal, and energy. These factors namely increasing consumption in the emerging markets, technological maturity, scale economies and raw material intensity are leading to some consolidation of the industry. Arcelor-Mittal merger followed by Tata Steel-Corus mergers are part of the trend of consolidation of the industry. Steel companies are acquiring upstream companies to utilize their cheap sources of raw materials or downstream producers to get access to consumers across borders. The steel industry has seen record mergers in the recent past including a number of mega-deals worth over $1 billion. According to Bloomberg, steel companies were involved in 270 M&As worth $33 billion in 2005 which rose to 347 M&As valued at $95 billion in 2006. According to an OECD (2007) study, the mining and processing of raw materials saw the biggest amount of cross-border M&As in the OECD in 2006, followed by the telecommunication, financial and the media and entertainment sectors. In 2006, China and India ranked among the top 10 steel-producing countries of the world (see Table 5), with China being the largest producer accounting for 34 per cent of the world's output.

Table 5: Major Steel-producing Countries, 2007
(Million Metric Tonnes)

Country	**2007**		**2006**	
China	1	489.2	1	423.0
Japan	2	120.2	2	116.2
United States	3	98.2	3	98.6
Russia	4	72.4	4	70.8
India	5	53.1	5	49.5
South Korea	6	51.5	6	48.5
Germany	7	48.6	7	47.2
Ukraine	8	42.8	8	40.9
Brazil	9	33.8	10	30.9
Italy	10	31.5	9	31.6
Turkey	11	25.8	11	23.3
Taiwan, China	12	20.9	12	20.1
France	13	19.2	13	19.9
Spain	14	19.0	14	18.4
Mexico	15	17.6	15	16.4
Canada	16	15.6	16	15.5
United Kingdom	17	14.3	17	13.9
Belgium	18	10.7	18	11.6
Poland	19	10.6	19	10.0
Iran	20	10.1	20	9.8
World		**1344**		**1251**

Source: International Iron & Steel Institute (2008), *World Steel in figures 2008*, Brussels

The rise of China and India has led to significant changes in the global steel industry in the past two decades. India is still in the stage of low steel intensity and its per capita steel consumption is very low compared to international standards. China is rapidly catching up with the western levels of per capita consumption of steel (Table 6). A recent study by Tata Services (2006), the demand elasticity of steel with respect to GDP was found to be 0.95 from 1990-91 to 2005-06. Table 7 shows that the GDP elasticity of steel is higher for China at 1.15. It is not surprising since China accounts for more than one-third of the world steel consumption. India's steel consumption is much lower, merely one-tenth of China's. Though, Japan and USA have higher steel consumption, their elasticities are much lower. However, looking at the annual growth rates, we find that India comes next only to China. The demand for steel in India is going to rise in the coming decades rapidly as the country catches up with industrialization and development. Therefore, major steel groups from across the world have announced major programmes of investment in expanding production capacity e.g. POSCO, Arcelor Mittal, Tata Steel, Vedanta Resources, among others. Since 2001, world steel prices have tripled with rise in profitability and the steel intensity has increased in the recent past mainly owing to growing demand in Asia (Marsh, 2007).

Table 6: Apparent Per Capita Steel Consumption

(kilograms finished steel products)

	2001	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
European Union (27)	329.4	327.0	328.6	349.9	335.0	378.9	392.0
NAFTA	319.9	324.3	306.8	344.7	320.4	353.1	317.8
Central and South America	90.3	83.9	85.9	98.0	94.4	105.6	119.0
Africa	29.1	31.2	29.2	29.3	32.0	34.5	35.8
China	123.5	148.5	185.4	211.4	252.7	273.6	307.3
India	26.8	28.4	30.1	31.6	35.2	39.6	43.4
Japan	575.2	562.4	575.2	601.1	609.6	617.4	625.9
South Korea	814.0	924.3	956.0	990.3	984.4	1,044.2	1,135.5
Asia	104.2	116.6	130.9	143.7	159.4	167.9	183.5
Australia and New Zealand	268.2	298.1	308.3	327.0	321.2	315.8	340.7

Source: International Iron & Steel Institute (2008) *World Steel in figures 2008*

Table 7: Country-wise Steel Consumption, Industry Share and Elasticity of Steel

	2005 Share of world steel consumption (%)	1995-2005 CAGR (%)	2004 Share of industry in GDP (%)	1990-2006 GDP elasticity of steel
Brazil	1.7	3.4	40	1.88
China	31.1	13.7	46	1.15
India	3.1	5.3	27	0.95
Japan	7.7	-0.2	31	-0.67
USA	10.2	0.3	22	0.23

Source*:* Tata Services (2006)

Indian Steel Industry

The economic reforms of 1991 freed the steel industry from the shackles of government control by delicensing private investment in steel and abolishing administered prices. The new steel policy not only dereserved the integrated steel plant from the public sector but in a turn-around from past policies, started the privatization of public sector steel companies by divesting their shares in the stock market. The liberalization process set in motion by the reforms also did away with restrictions on private domestic and foreign investments. FDI was allowed into this sector with foreign equity participation up to 51 percent subject to the restrictions that foreign equity has to cover not only the cost of imports of capital goods but also foreign technology agreements till a specified limit. All these policy changes opened up new opportunities for growth for Indian steel enterprises and new plants were set up with latest technology and large production capacities such as Essar Gujarat and Jindal Strips.

As far as the market structure of the Indian steel industry is concerned, the market for finished steel has three large players – the Steel Authority of India (SAIL), Rashtriya Ispat Nigam Limited (RINL) and Tata Steel - which account for about half the supply of steel (Sengupta, 2004). These three enterprises do not compete with each other directly due to differentiations arising from product mix and location. Even though the freight equalization

scheme has been dismantled to a large extent, these differentiations would enable them to enjoy monopolistic privileges in separate markets for specified products. These are large enough to influence market prices where as the large number of small and medium producers supply steel at market-determined prices. The pricing decisions of these large steel enterprises are in turn determined by import prices and the open market price movements. Thus, the international environment has a significant impact on the functioning of the domestic market in an integrated open economy and outward-orientation strategies become imperative for enhancing competitiveness.

India's comparative advantage lies in its availability of good quality iron ore at only $10 per tonne for plants with captive mines and $20 per tonne for iron ore purchased from the market which is much cheaper than the cost of $30-40 per tonne prevailing in developed countries. Earlier, captive mines used to reduce productivity and quality but now these same captive mines have become a source of advantage because of their lower cost in the face of changing global demand[1]. Even the cost of labour is much lower in India in the range of $1-1.5 per labour hour as opposed to $30-40 per labour hour in the developed countries. On the flip side, the energy costs of steel making in India are relatively high, being 33 percent of total costs compared to 20 percent in developed countries. Similarly, the productivity of Indian labour is also low ranging between 80-190 tonnes per man year against a high of 300-500 tonnes per man year for developed countries (Sengupta, 2004). This is owing to the lack of technical upgradation of steel plants, outdated production processes, overmanning and low skill development. To overcome these shortfalls, the Indian steel industry is in the process of technological and organizational restructuring in order to compete effectively with foreign firms. There are variations across the enterprises in terms of competitiveness. Tata Steel had emerged one of the most competitive steel producers in the world even before it acquired Corus and other enterprises in East Asia.

Emerging Patterns of Outward FDI from India and China in Steel Industry

Given the scale economies in the steel industry, it is dominated by a few large enterprises in different countries. In India, Steel Authority of India (a public sector company), Tata Steel, Essar Steels, JSW Steels and Ispat Industries are prominent players in the industry. Similarly in China, Sinosteel, Baosteel, Capital Steel, are the key enterprises in the steel industry. In order to examine the OFDI activity of steel enterprises in the two countries, we gathered information on OFDI activity of two major enterprises from each country. These are Tata Steel and Essar Steel in India (both private sector players), and Sinosteel and Baosteel in China. The emerging patterns in OFDI activity of these companies is summarized in Tables 8 and 9 respectively.

Table 8 suggests that of the 6 major overseas investments made by Tata Steel, two are Greenfield market-seeking investments developing production facilities in Vietnam and South Africa respectively. One is natural resource-seeking investment of minority nature in Australian coal mining project. The key outward investments are acquisitions of NatSteel in Singapore, Millennium Steel in Thailand, and Corus in UK. Of these NatSteel and Corus were motivated by the urge to achieve scales and global footprints. NatSteel operates in 9 Southeast and East Asian countries. Corus has global operations and is the second largest steel company in Europe. Through these acquisitions, Tata Steel now has footprints in about 40 countries across the globe and has emerged as the sixth largest steel producer in the world. Tata-NatSteel-Millenium-Corus acquisitions bring together Tata Steel's low cost production

[1] We are grateful to an anonymous referee for suggesting this explanation.

bases and their access to natural resource endowments in India, with the access to processing technology and consumers. There are some indications that such a restructuring and production networking is taking place. Apparently Tata Steel and NatSteel plants in different Southeast Asian countries are being covered by a scheme of regional production network involving pallets going from India to the NatSteel plants and special steels to come from NatSteel's Southeast Asia plants to India. This way the synergy or the locational advantages of India emanating from the iron ore deposits will be available to the NatSteel plants and their specialization for some special steels to Tata Steel, will be exploited for mutual advantage. Essar Steel's acquisitions of Algoma Steel in Canada was also driven by a similar motivation of acquiring global footprints. Essar is building two Greenfield plants in Vietnam and Trinidad and Tobago respectively as a part of horizontal market seeking strategy. It has also undertaken acquisition of a mining company in the US as a part of natural resource seeking strategy.

It would appear therefore, that Indian steel companies' overseas activity is motivated by essentially internationalization of operations or acquisition of global footprints objective.

Table 8: Outward Investments made by Leading Indian Steel Companies

Name	Country	Value (US $ million)/	capacity (million m.t.)	Year	Motivation	Entry mode
Tata Steel's Overseas Subsidiaries/ Affiliates						
Corus Steel PLC	Plants in U.K./ Netherlands and global presence	12100.00	14	2007	Strategic assets seeking	acquisition
Millenium Steel Plc.	Thailand	175.0		2005	Market seeking	acquisition
NatSteel Asia Pte.	Singapore with operations in 9 East Asia countries	283.7	2	2004	Strategic assets seeking	acquisition
Joint venture with Vietnam Steel Corporation	Viet Nam		4.5	2007	Market seeking	greenfield
Tata Steel KZN Pty Ltd.	South Africa	ZAR 650 million	135,000 m.t. of high grade ferro chrome	Under construction	Market seeking	greenfield
Carborough Downs Coal Project	Australia	5 % stake	58 million m.t. of raw coal		Natural resource seeking	acquisition
Essar Steel's Overseas Subsidiaries/ Affiliates						
Algoma Steel	Canada	1500	2.4 million m.t.	2007	Strategic assets seeking	acquisition
Minnesota Steel	USA		1.4 billion m.t. of iron ore	2007	Natural resource seeking	acquisition
Essar Vietnam	Vietnam		2	Under	Market	greenfield

Steel Corporation			million m.t.	construction	seeking	
Essar Steel Caribbean	Trinidad and Tobago		2.5 million m.t.	Under construction	Market seeking	greenfield

Source: compiled from websites of companies and business news.

The Chinese enterprises have undertaken many overseas investments as listed and summarized in Table 9. Although more details of the magnitude of investments and capacity etc. are not available from the company websites, the motivations are clear from the activities listed. For both Sinosteel as well as Baosteel, the major motivations for outward investments have been development of natural resources and trading of their products. There are hardly any investments in the direction of horizontal expansion abroad or internationalization of their operations.

Table 9: Outward Investments made by Leading Chinese Steel Companies

Name	Country	Activity/ motivation
Sinosteel's Overseas Subsidiaries/ Affiliates		
Sinosteel International Holding CO., Ltd.	Hong Kong	To manage business and capital operation of overseas organs of Sinosteel.
Sinosteel Australia Pty Ltd	Australia	Operation & Management of the Channar mining Joint Venture Project, discovering investment opportunities for resource development in Australia and trading.
Sinosteel Australia Mining Pty., Ltd.	Australia	Participate in the exploration, investigation and developing of other iron ore resources.
Sinosteel Uranium SA Pty., Ltd.	Australia	exploration and mining development of Uranium and other minerals.
Sinosteel South Africa Pty.,ltd.	South Africa	Resources development, International cooperation, Commodity trading
ASA Metals Pty., Ltd.	South Africa	Chrome ore & Charge Ferrochrome Producing ; Chrome ore & Charge Ferrochrome Trade; Chrome resource development
Tubatse Chrome Minerals Pty. Ltd.	South Africa	Chrome mining
Sinosteel India Pvt Ltd.	India	Metallurgical resource and project development, trade and logistics, technology service and equipment supply
Sinosteel Germany GmbH	Germany	Trading of metallurgical raw materials and steel products, metallurgical equipments, metallurgical & mining machineries, spare parts etc. and logistics.
China Sinosteel (Singapore) Pte., Ltd.	Singapore	complete plant and technology know-how Import / Export. strategy on investment and / or finance the joint-venture for the exploitation of natural resources and specific project cooperation. trading or re-export trading, and facilitate with warehouse and ocean transportation services.
Sinosteel Brasil Metallurgical Trading Ltd.	Brazil	Metallurgical trading
Sinosteel Gabon Company Ltd.	Gabon	prospecting, exploration, mining, process and export of minerals, logistic and project management.
PT. Sinosteel Indonesia	Indonesia	developing processing & trading of metallurgical mineral resources; trading and logistics of main & auxiliary metallurgical raw materials, products, and spare parts; supply of metallurgical equipment and related engineering technical service.
PT. Sinosteel Indonesia Mining	Indonesia	Supporting services for general mining and large-scale trading
Sinosteel (Cambodia) Co., Ltd	Cambodia	
Sinosteel Corporation Vietnam Representative Office	Vietnam	Representing Sinosteel Corporation and its subsidiaries, assist Vietnamese steel factories and other clients in business, oversight of Laotian and Kampuchean businesses

Sinosteel Corporation Turkey Representative Office	Turkey	Marketing, Project follow-up, After-sales Service, Information Collection, Consultation, and Promotion. Liaison, Co-ordination, Service for current existing projects.
Bao Steel's Overseas Subsidiaries/ Affiliates		
Baosteel Trading Europe GmbH	Germany	trade and investment in Europe, Africa and Middle-East.
Howa Trading Co., Ltd	Japan	trade in steel product, equipment, spare parts and materials
Baosteel Singapore Pte Ltd	Singapore	trading of steel products in Singapore, Malaysia, Indonesia, Philippines, Thailand, Vietnam, other ASEAN countries and Southern Asia including India, Pakistan, and Bangladesh.
Bao-Trans Enterprises Ltd.	HongKong	
Bao-Island Enterprises Limited	HongKong	
Baosteel America Inc	USA	sole agency for steel import & export business of Baosteel Group in North, Middle and South America.
Baosteel Do Brasil LTDA	Brazil	
Baovale Mineracao S.A.	Brazil	mining

Source: compiled from websites of companies and business news.

The Chinese companies seem to have practiced a division of labour between them regarding the geographical coverage. Sinosteel's major focus has been on Australia and Africa, while Baosteel seems to be focusing on Brazil and other western countries. Sinosteel's multiple investment proposals in Australia have attracted concerns. Sinosteel won permission in April 2008 to acquire Midwest, an Australian iron-ore company, but later applications have been stalled. An estimated US$ 40 billion of Chinese acquisition proposals are waiting for approval of Australia's Foreign Investment Review Board.[2]

To sum up the emerging patterns from the above discussion, Indian enterprises in steel industry are seeking to internationalize their operations through OFDI while Chinese enterprises are mainly undertaking OFDI to secure their supply of raw materials for expanding production of steel in China. Therefore, all the OFDI flows do not necessarily lead to internationalization of a firm's operations. Some are just seeking access to raw materials and supporting its trading activities.

6. Concluding Remarks

In the era of globalization, different types of networks are evolving among countries that go beyond mere exports and investments and FDI outflows from developing countries now account for a significant proportion of global outflows. It has been observed that the focus of developing countries like India has shifted towards attaining strategic positions in specific areas like drugs and pharmaceuticals, chemicals and petrochemicals, IT and software, broadcast and communications and recently, steel. The government has supported emerging MNEs by providing appropriate policy framework and infrastructure so that they can boost overseas expansion.

Outward FDI is increasingly being used as a strategy of non-price competition by emerging MNEs for supporting trade, augmenting asset bundles and escaping protectionist barriers to enter markets. Indications for this change in motivation come from the changing geographical distribution and sectoral composition over the years from developing countries to developed

[2] *The Economist*, 12 July 2008: 68-9.

countries and from traditional sectors to sunrise sectors. With rapid technological advances, liberalization of markets and establishment of regional trading blocs, the outflows of Indian FDI have moved away from the traditional simple technology goods to goods and services requiring high technological and skill content.

China's outward FDI has grown enormously, from initial hesitation to government promotion. Given the rapid economic development being witnessed in China and the mounting foreign exchange reserves, it is likely that China will emerge as a large source of FDI in the years to come. In contrast to China's initial interest in outward FDI aimed at acquiring natural resources, the major Indian outflows of FDI for natural resources have occurred only in the recent past. The main reason for Chinese FDI outflow has been the acquisition of natural resources where as for Indian FDI outflows, the main driving force has been internationalization of operations or acquisition of global footprints. It is very well demonstrated by the emerging patterns of OFDI made by Indian and Chinese enterprises in steel industry.

Indian MNEs have been latecomers on the global scene and are now rapidly trying to acquire global footprints through Greenfield investments and acquisitions of foreign firms. It would have been difficult to imagine a developing country steel company taking over a sizable European rival a few years ago but now it is a reasonable expectation given the accumulated managerial expertise and other ownership advantages in companies from India, China, Russia, Brazil and other emerging economies. In the coming years, the trend of OFDI and internationalization of enterprises from emerging countries is likely to further deepen. The trend is welcome from the point of view of developing countries as it diversifies options for them of sources of FDI and also for more cost effective and affordable processes and technologies than those available from conventional sources.

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[i] See Gopinath (2007).